

U.S. Fire Administration / National Fire Academy

*Coffee Break Training***Topic: Classifying Flammable and Combustible Liquids**

Learning objective: The student shall be able to classify liquids as “flammable” or “combustible”, based on their physical characteristics.

The key to successful application of building and fire codes in your jurisdiction is to collect accurate information, conduct solid research, and take your time to verify your facts.

When it comes to regulating flammable and combustible liquids—easily one of our most common hazardous materials—the first step in this process is to classify the liquid in accordance with the codes and standards. Once the liquid is classified, the codes prescribe the limits on how much and where a particular liquid class may be stored, used, dispensed, handled, or transported, such as the containers in this flammable liquid storage room.

Flammable and combustible liquids are classified by their *flashpoints* and *boiling temperatures*.

Liquid Class	Flashpoint		Boiling Temperature	
	°F	°C	°F	°C
<i>Flammable Liquids</i>				
Class I-A	< 73	< 23	< 100	< 38
Class I-B	< 73	< 23	≥ 100	≥ 38
Class I-C	≥ 73	≥ 23	N/A	N/A
<i>Combustible Liquids</i>				
Class II	≥ 100 < 140	≥ 38 < 60	N/A	N/A
Class III-A	≥ 140 < 200	≥ 60 < 93	N/A	N/A
Class III-B	≥ 200	≥ 93	N/A	N/A

N/A = Not applicable

Laboratory assessments that are done to obtain these values are performed in accordance with American Society for Testing and Materials (ASTM) Standard D56 Test Method for Flash Point by Tag Closed Tester, or D93 Test Method for Flash Point by Pensky-Martens Closed Cup Tester.

Information on the classification of various products can be obtained from the manufacturer or shipper's Material Safety Data Sheet (MSDS).

For additional information, refer to International Fire Code, Chapter 34; NFPA 1, Uniform Fire Code™, Chapter 60; or NFPA 30, Flammable and Combustible Liquids Code.

